



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION
CITY VIEW PLAZA II, SUITE 7000
GUAYNABO, PUERTO RICO 00968-8069

MAY 29 2014

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Article Number: 7011 0470 0000 5040 2526

Irma López
Executive Director
Compliance and Quality Control Directorate
Puerto Rico Aqueduct and Sewer Authority
P.O. Box 7066
San Juan, Puerto Rico 00916-9990

**Re: Compliance Evaluation Inspection
Guánica Wastewater Treatment Plant
NPDES Permit Number PR0020486**

Dear Mrs. López:

On May 7, 2014, the United States Environmental Protection Agency (EPA) conducted a Compliance Evaluation Inspection (CEI) at the Guánica Wastewater Treatment Plant. The purpose of the inspection was to assess PRASA's operational and maintenance practices at the facility.

Enclosed you will find a copy of the Water Compliance Inspection Report, which summarizes our findings during the CEI. Within forty five (45) calendar days of receipt of this letter, please respond with the actions PRASA has taken or will be taken to address the findings of the inspection.

Should you have any questions, feel free to contact me or Miguel A. Batista of my staff at (787) 977-5823.

Cordially,

Jaime A. Géliga
Chief
Municipal Water Programs Branch
Caribbean Environmental Protection Division

Enclosure

cc. Roberto Ayala, EQB
David Velázquez, PRASA
Nashaly Berrios, PRASA
Jeannette Velez, PRASA



United States Environmental Protection Agency
Washington, D.C. 20460
Water Compliance Inspection Report

Form Approved.
OMB No. 2040-0057
Approval expires 8-31-98

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NPDES	yr/mo/day	Inspection Type	Inspector	Fac Type
1 N 2 5 3 P R 0 0 2 0 4 8 6 11 12 1 4 0 5 0 7 17 18 C 19 R 20 1					
Remarks					
2					
Inspection Work Days Facility Self-Monitoring Evaluation Rating B1 QA Reserved					
6 2.0 69 70 1 71 72 73 74 75 80					

Section B: Facility Data

Name and Location of Facility Inspected (for industrial users discharging to POTW, also include name and NPDES permit number)	Entry Time/Date	Permit Effective Date
GUÁNICA WASTEWATER TREATMENT PLANT YAGUER ST. Guánica, P.R. 00653	8:40 am 05/07/2014	12/01/2008
	Exit Time/Date	Permit Expiration Date
	10:45 am 05/07/2014	11/30/2013
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)	Other Facility Data	
787-821-2865 See attached report for on-site representative		
Name, Address of Responsible Official/Title/Phone and Fax Number(s)		
Héctor Gierbolini, Executive Regional Director PRASA South Region		
Contacted		
Yes No		

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

<input checked="" type="checkbox"/> Permit	<input checked="" type="checkbox"/> Flow Measurement	<input checked="" type="checkbox"/> Operations & Maintenance	CSO/SSO (Sewer Overflow)
<input checked="" type="checkbox"/> Records/Reports	<input checked="" type="checkbox"/> Self-Monitoring Program	<input checked="" type="checkbox"/> Sludge Handling/Disposal	Pollution Prevention
<input checked="" type="checkbox"/> Facility Site Review	Compliance Schedules	Pretreatment	Multimedia
<input checked="" type="checkbox"/> Effluent/Receiving Water	Laboratory	Storm Water	Other: Pump Stations

Section D: Summary of Findings/Comments (Attach additional sheets of narrative and checklists as necessary)

See attached report for findings.		
Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
Miguel A. Batista, Environmental Engineer	CEPD-MWPB (787) 977-5823 (ph) ; (787) 289-7104 (fax)	05/20/2014
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date
Jaime A. Geliga, Chief Municipal Water Programs Branch	CEPD-MWPB (787) 977-5840 (ph) ; (787) 289-7104 (fax)	5/20/14

**Summary of Findings/Comments
Water Compliance Inspection Report Form
(EPA Form 3560-3)**

COMPLIANCE EVALUATION INSPECTION

Facility Name: Guánica WWTP
NPDES Permit Number: PR0020486
PRASA Representative: Julio I. Fraticelli, Plant Operator
Israel Cruz, Plant Operator
José Bosa, Plant Supervisor

I. BACKGROUND

A Compliance Evaluation Inspection (CEI) was conducted on May 7, 2014 at the Guánica WWTP. The CEI consisted of an opening interview to discuss the purpose of the inspection and to request information about the facility. The inspection consisted of a site tour to assess the operational and maintenance conditions, document's review, and a closing interview to discuss preliminary findings. Finally, a grab sample of the effluent was collected to determine compliance with the effluent limitations established by the permit at the time of the inspection.

II. PLANT OPERATION AND MAINTENANCE

The Guánica WWTP consists of two treatment modules. One module is a 0.5 MGD activated sludge conventional package plant (Old Plant) and the second module is a 1.25 MGD Biological Nutrient Removal (BNR) treatment plant (New Plant). At the time of the CEI, the BNR module (New Plant) was not in operation.

At the time of the inspection, Mr. Julio I. Fraticelli and Mr. Israel Cruz were acting as Plant Operators for the Guánica WWTP. Mr. Fraticelli has obtained the certification as a Wastewater Treatment Plant Operator Level IV # 2249 which expires on March 15, 2015. Mr. Cruz has obtained the certification as a Wastewater Treatment Plant Operator Level III # 2922 which expires on August 2, 2015.

III. FACILITY SITE REVIEW – SUMMARY OF FINDINGS

A. Preliminary Treatment

1. Bar Screens/Comminutors

- The plant has two entrance channels: one channel has a bar screen, and the other channel has a comminutor.
- The entrance channel with the bar screen is used when the comminutor goes out of service.
- At the time of the CEI, the bar screen was not in use.
- The comminutor was in operation.

2. Influent Wet Well/Influent Pumps

- The wet well was clean, and had no solids.
- The plant has six (6) influent pumps: three (3) for the old plant, and three (3) for the new plant. The three (3) influent pumps at the new plant were not in operation. The three (3) influent pumps at the old plant were operating on automatic mode.

3. Grit Removal Mechanism

- The facility has two (2) Pista type grit removal systems. Unit # 1 was in operation. Unit # 2 was out of service, and had an oil leak.

- The screw conveyor to collect the grit from both grit removal systems was on automatic mode of operation.

B. Secondary Treatment

1. Activated Sludge Module

- Some sludge and grease were observed at the surface of the clarifier, and at the clarifier's center well or inner baffle, as well.
- The sludge blanket at the clarifier was approximately 1 ft.
- The clarifier's arm base was corroded.
- The rubber for the clarifier's arm was broken.
- Some sprayers of the distribution pipeline were clogged.
- The plant has three (3) blowers. Original blower # 1 (which was taken out to be repaired) was replaced by a temporary unit on April 8, 2014. Temporary blower # 1 was in operation. Blower # 2 was in operation. Blower # 3 was out of service.

C. Chlorination/De-chlorination Facilities

- There are three (3) chlorine contact chambers at the facility. The chlorine contact chamber # 2 was in use. The chlorine contact chambers # 1 and # 3 were not in service.
- The chlorine inventory at the time of the inspection consisted of four (4) - two thousand gallon pound chlorine cylinders (2,000 lbs): one (1) chlorine cylinder was in use, one (1) chlorine cylinder was empty, and two (2) chlorine cylinders were full.
- The plant has two (2) chlorine leak detectors as reference instruments. When a chlorine leak was simulated, both units did work. The chlorine leak detectors were calibrated on April 16, 2014.
- The exhaust fan was tested, and it was found operable.
- The automatic chlorine dosifier device (Hydro) was in operation. It was calibrated on April 16, 2014.

D. Sludge Handling

- The aerobic digester chamber was in operation. Solids accumulation was not observed at its surface.
- The plant has two (2) unroofed sludge drying beds. At the time of the CEI, both units were empty.
- The sludge belt filter press was on stand-by mode, but operable.

E. Alternate Power Units (APU)

- The new 750 KVA Alternate Power Unit (APU) has a 5,000-gallon diesel tank capacity.
- A diesel level ruler is now available at the plant. Operators have now a safe access to add diesel for the APU.
- The addition of water for the new APU's radiator, still results unsafe for the operator who needs to stand on the APU's motor to perform this task. This unit has no stairs or a safe mechanism to access it. This finding has been observed at least during the previous inspections conducted on May 7, 2013; and November 21, 2013.
- The power outage simulation was not performed.

F. Auto-Samplers

- This facility has two (2) auto-samplers. At the time of the CEI, the temperature inside influent auto-sampler was 3 °C, and the temperature inside the effluent auto-sampler was 2 °C. Both temperatures were within the acceptable range of less or equal to 6 °C.
- The influent and effluent sampling hoses looked clean.
- The thermometers for both auto-samplers were last calibrated on May 20, 2013.

G. Daily Sampling Meters

- The dissolved oxygen, the colorimeter, the turbidimeter, the pH and the residual chlorine meters were in good operational conditions.
- The above-mentioned equipments were last calibrated on April 16, 2014.

H. Flow Measuring Devices

- The primary flow measuring device being used at the facility is a Parshall flume.
- A flow totalizer and a chart recorder were being used as secondary flow measuring devices.
- The flow totalizer was last calibrated on April 16, 2014.
- The chart recorder was last calibrated on April 16, 2014.

I. Effluent Quality

A grab sample of the effluent was taken by the operator at sampling point 001 during the inspection. Effluent was clear, no solids were observed. The results of the effluent sample taken during the inspection were as follows:

- a. Residual chlorine – 0.01 mg/l. *
- b. pH – 7.47 S.U.
- c. Temperature - 30.0 °C.
- d. Dissolved oxygen (DO) – 7.10 mg/l.
- e. Settleable solids- 0.00.
- f. Turbidity – 1.46 NTU.

* Chlorine's application adjustment was performed by the plant operator at the time of the CEI.

IV. RECORDS REVIEW

A. A copy of the NPDES permit was available at the plant.

B. Process Control, Sampling and Compliance Data Record

1. Copies of the daily sampling average reports were available for review.
2. A review of the DMRs for the period of April 2013 to March 2014 revealed the following exceedances:
 - March/2014 – Arsenic, Copper, Total Nitrogen.
 - February/2014 – Copper, Total Nitrogen, Cyanide Free.
 - January/2014 – Copper, Total Nitrogen, pH.
 - December/2013 – Arsenic, Copper, Total Nitrogen, Cyanide Free.
 - November/2013 – Arsenic, Copper, Total Nitrogen, Cyanide Free, Enterococci.
 - October/2013 – Arsenic, Copper, Total Nitrogen, Cyanide Free.
 - September/2013 – Arsenic, Copper, Total Nitrogen, Cyanide Free.
 - August/2013 – Arsenic, Copper, Total Nitrogen, pH.
 - July/2013 – Arsenic, Copper, Total Nitrogen.
 - June/2013 - Arsenic, Copper, Total Nitrogen, Cyanide Free.
 - May/2013 – Arsenic, Copper, Total Nitrogen, Cyanide Free.
 - Apr/2013 - Arsenic, Copper, Total Nitrogen, Cyanide Free.
3. Copies of the monthly sampling itineraries and sampling records were available for randomly review. Documents dated on January 8, 2014; February 26, 2014; March 5, 2014; and April 16, 2014; appeared to be updated.
4. Copies of the auto-samplers maintenance records and chain of custody data were available for review.

C. Maintenance Records

1. Equipment operational status checklist (Form AAA-48) - The equipment operational status is being check on a daily basis.

2. The following tables details the status of the equipment that was out of operation or in malfunction at the time of the previous inspection (RI conducted on November 21, 2013):

a) Blowers and Generator Building

EQUIPMENT	DATE	NOTIFICATION # SAP #	COMMENT	STATUS
Motor-Blower # 3 (old plant)	May/13/13	10173756 208952	Out of operation.	Not corrected.
Exhaust Fan - Blowers Room - Bathroom	Sep/24/13	10210393 1112474	Out of service.	Corrected on Jan/30/14.
Exhaust Fan - Blowers Room	Sep/24/13	10210394 1112475	Out of service.	Corrected on Sep/24/13.

b) Chlorination Building

EQUIPMENT	DATE	NOTIFICATION # SAP #	COMMENT	STATUS
Booster Pump Potable Cl2	Oct/30/13	10220593 1104903	Leak.	Corrected on Dec/29/13.
Automatic Chlorine Dosifier	Nov/4/13	10221654 1114753	Obstructed vacuum.	Corrected on Feb/20/14.
Chlorine Gas Detector 4	Nov/11/13	10223515 1110020	Inactive alarm.	Corrected on Dec/10/13.

c) BNR Building – Influent Dry Pit

EQUIPMENT	DATE	NOTIFICATION # SAP #	COMMENT	STATUS
Paddle Drive Degritter # 1	Nov/4/13	10221656 209655	Oil change.	Corrected on Nov/29/13.
Paddle Drive Degritter # 2	Nov/4/13	10221657 209656	Oil change.	Corrected on Nov/29/13.
Influent Pumps Panel (new plant)	Nov/4/13	10221658 213036	It does not operate in automatic mode.	Corrected on Jan/7/14.
Motor – Panel Drive Degritter # 1	Nov/4/13	10221659 1115315	Flooded area.	Corrected on Feb/26/14.
Motor – Panel Drive Degritter # 2	Nov/4/13	10221660 1115316	Flooded area.	Corrected on Feb/26/14.

d) BNR Building – Filter Press

EQUIPMENT	DATE	NOTIFICATION # SAP #	COMMENT	STATUS
Filter Press	Jun/25/13	10184561 1107285	Corroded angular structure.	Not corrected.
Transmission	Jun/25/13	10184564 1112468	Chain change/paint.	Not corrected.

e) BNR Building - Generator

EQUIPMENT	DATE	NOTIFICATION # SAP #	COMMENT	STATUS
Generator	Nov/11/13	10223524 1102660	Broken radiator.	Corrected on Mar/8/14.

f) BNR Building – Blowers

EQUIPMENT	DATE	NOTIFICATION # SAP #	COMMENT	STATUS
MCC BNR Room	Sep/17/13	10207725 213035	Out of operation. Cables were stolen.	Corrected on Feb/13/14.

g) Other

EQUIPMENT	DATE	NOTIFICATION # SAP #	COMMENT	STATUS
Exterior Illumination	Sep/08/13	10206847 -----	Out of operation.	Not corrected.

3. At the time of the CEI, the following equipment was found out of operation or in malfunction:

a) Blowers and Generator Building

EQUIPMENT	DATE	NOTIFICATION #	SAP #	COMMENT
Motor-Blower # 1	Jan/23/14	10236716	208950	Squeaky noise. Vibration.
Motor-Blower # 2	Apr/2/14	10251800	208951	Air leak.

b) Clarifier Tank Building

EQUIPMENT	DATE	NOTIFICATION #	SAP #	COMMENT
Spray Sum Pump	Apr/7/14	10252742	1114178	Clogged.
Clarifier's Arm Transmission	Mar/14/14	10248208	209657	Corroded bases. Broken rubber.

c) Non Potable Water Pit Building

EQUIPMENT	DATE	NOTIFICATION #	SAP #	COMMENT
Pump/Motor NPW # 1	Apr/9/14	10253272	1113577	Broken check valve. Pump out of service.

d) Influent Dry Pit BNR Building

EQUIPMENT	DATE	NOTIFICATION #	SAP #	COMMENT
Paddle Drive Degritter # 2	Mar/11/14	10247430	209656	Broken seals.

e) BNR Building – Blowers

EQUIPMENT	DATE	NOTIFICATION #	SAP #	COMMENT
Motor-Blower BNR # 2	Mar/21/14	10247624	208945	Filter change.
Motor-Blower BNR # 3	Mar/21/14	10247625	208946	Filter change.
Motor-Blower BNR # 4	Mar/21/14	10247626	208947	Filter change.
Motor-Blower EQ # 1	Mar/21/14	10247620	208948	Filter/pulley change.
Motor-Blower EQ # 2	Mar/21/14	10247627	208949	Filter change.
Motor-Blower BNR # 1	Mar/21/14	10247623	1104338	Filter change.

f) Other

EQUIPMENT	DATE	NOTIFICATION #	SAP #	COMMENT
Booster Pump – Elect manhole (chlorine)	Nov/29/13	10226835	No SAP #.	Got burned.
UPS System – Chlorine cylinders.	Dec/17/13	10230556	No SAP #.	Battery backup.
Air lift – waste.	Feb/27/14	10236719	No SAP #.	Clogged.

3. Logbook – A random check of the Preventive Maintenance Schedule (PMS) for the months of January/2014 until April/2014 revealed that all work orders were performed as scheduled.
 4. Emergency generator checklist (Form AAA-500-C) – The operational status of the APU is being done on a bi-weekly basis. The last oil change for the APU was performed on November 14, 2012.
- D. The Monthly Chlorine Report and the Chemical Products Report were reviewed from May/2013 until April/2014. Documentation appeared to be updated.

V. CONCLUSION

Please note that Part C.5 of Attachment I of the permit requires the permittee to properly operate and maintain all facilities and systems for collection and treatment (and related appurtenances) which are installed or used to achieve compliance.